METHOD OF ANALYSIS

The first two collections of Fabriano papers to be published within the **Corpus Chartarum Fabriano** were the **“Augusto Zonghi” Collection** and the **“Aurelio Zonghi” Collection**. The two brothers worked closely together for some time and the two collections, although different in size and accompanying material, were created following the same method and with the active contribution of Aurelio in the description of Augusto's papers.

The three essays written by the two scholars between 1881 and 1911, concerning the history of paper and watermark, were collected in 2003, together with the critical introduction by Giancarlo Castagnari, in the volume ***L'opera dei fratelli Zonghi. L’era del segno nella storia della carta***, Cartiere Miliani Fabriano – Fedrigoni Group. The publication was the first step to take in understanding the method with which the Zonghi brothers created their collections, ordered and described the motifs and dated the papers.

After the acquisition in **2016**, the **"Augusto Zonghi" Collection** was the first to be studied and constituted the model on which to build the Corpus Chartarum Fabriano project. In 2019 the first records were uploaded to the platform and from 2021 the entire collection can be consulted online.

In **2022**, following an agreement with the **Municipality of Fabriano**, owner of the collection, the **Fedrigoni Fabriano Foundation** was able to use the same working method for the papers in the **"Aurelio Zonghi" Collection**. Since April 2023, the records relating to this collection have also been online on the Corpus Chartarum Fabriano website.

The **technical data sheet** which collects all the available data referring to a card, has been constantly updated over the years with the inclusion of new information, and is already prepared to soon accommodate the records of the **"Luigi Tosti Duca di Valminuta"** Collection.

- **“AUGUSTO ZONGHI” COLLECTION (CAGZ)**

The **“Augusto Zonghi” Collection (CAGZ)** of ancient papers from Fabriano is made up of **10 large envelopes**, divided in turn into **198 files** containing **2.212 papers dating back from 1267 to 1798**. The **paper samples bearing the whole sign total 1,651, a partial sign 46, while 516 do not bear a sign at all**. There is also an **inventory** and **album** that make up part of the entire collection.

The **inventory** *“on the collection of Watermarks and ancient papers of Fabriano dating from 1267 to 1600”*, compiled by the same Zonghi in pencil, who enlisted in a chronological and progressive sequence **3,372 papers, numbering the envelopes** from I to IX, **the files** from 1 to 188), **dating the watermark motif, the number of chain lines**, their **dimensions, origin**, indication if an original whole watermarked paper existed or if only a sample without a watermark existed, as well as including observations. Envelope X has not been mentioned in the inventory, nevertheless, it does include papers that probably had been part of envelope IX (analysing the inventory it is to be assumed that the papers had been removed from other envelopes), but other papers too had been added to the collection in a second moment as for example the **87 papers dating from XVII and XVIII century**.

The **album** *“The marks of ancient papers from Fabriano collected and sketched out by Professor Augusto Zonghi”* (the title-page embellished by **Gaetano Galassi from Fermo**) consists in **134 plates** (cm 45 X 30) containing **1,887 figures of tracings reproduced from original watermarked paper sheets.**

Enhancing all the components of the collection, a digital database was created which would contain a description of all the 2,212 papers, 1,887 figures and signs not physically present but nevertheless

described in the inventory. While the data was being introduced some discrepancies arose between the existing information on the paper, album and on the inventory: in these cases, priority was given to the information that had been recorded on the latter document. Where the figure on the album relates to a sample on paper, the procedure followed was of grouping them under one file.

In order to carry out the **digitalization** and **graphic elaboration** of documents, the following was implemented:

- Computer iMac 27'' retina 5K 3,3 GHz Intel Core i5
- Scanner Epson Expression 11000XL format A3
- Scanning Programme Silver Fast 8 LaserSoft Imaging
- Adobe Creative Suite (Photoshop e Illustrator)

Initially, the **inventory** and relating information included in a digital document was first **digitalized** in order to facilitate research and consultation of data. The plates of the album have been digitized with reflection scanning.

The 134 files containing plates of the Album have been cleaned digitally of their imperfections in order that the tracings of Zonghi relating to the marks, chains and wires be clearly visible. The papers of the collection initially **underwent reflex scanning** and then **transparency** (backlight) at **300 dpi**. In the transparent scanning a programme SilverFast 8 was internally installed, some parameters implemented to regulate the tones, shades and lights in order to uniform all the scanning regardless of their thickness and weight of the paper. In other cases to prevent an over-exposition on the final result, it was necessary to alter the colour of the paper. Paper whose size measured more than A3 format had to be scanned more than once successively creating various files which were then compiled together: the underlying procedure does not exclude limited margins of error. Reflex scanning and transparency of the same document have also shown a difference in size precisely 0,02 cm to the advantage of the former which resulted in being greater.

The figures on the album have been processed digitally to extrapolate every single sign from the plate concerned in real-life dimensions. Following Zonghi's example in some respects, we have **reproduced tracings of every single sheet of paper**: **the border, chain lines** (and any eventual backing rods), **watermark, 20 liad lines** (for the measurement).

Only where the papers have been described in the inventory, has the information provided by Zonghi been entered on the database, as for the rest, **digital files relating to the same paper or figure in the album have been over-imposed, thus creating different configurations**.

To name the **records (ID)** the following procedure was adopted:

1. **All records characterized by the presence of the paper sample** in the collection begin with **Z0**, to which is added the inventory number assigned by the Fedrigoni Fabriano Foundation (e.g. Z02212) all records characterized by the presence of the paper sample in the collection (regardless of whether the watermark is "entire", "partial " or "absent" in the sheet).
2. Start with **ZA**, to which is added the figure number indicated on the album (e.g. ZA1839), **all records that do not have paper sample, but have the relative watermark traced on the album and the description in the inventory**.
3. Start with **ZI**, to which is added the progressive number present in the Zonghi inventory (e.g. ZI1297), **all the records that do not have a paper sample, nor the relative watermark traced on the album, but only the description in the inventory**.

- **“AURELIO ZONGHI” COLLECTION (CARZ)**

Following an agreement with the **Municipality of Fabriano**, owner of the collection, and with the consent of the **Soprintendenza Archivistica e Bibliografica per le Marche**, the **Fedrigoni Fabriano Foundation** was able to move the Aurelio Zonghi Collection from the **Museo della Carta e della filigrana di Fabriano** to its own premises for the time necessary to digitize the papers. Between June and July 2022 the scanning operations were completed and the case containing the collection was returned to the place of conservation.

From the investigation carried out on the papers, the **"Aurelio Zonghi" Collection (CARZ)** appears to be made up of **135 files** (folders), which contain **368 papers dated from 1293 to 1599**. The **paper samples bearing the whole sign total 323**, **a partial sign 7**, **while 38 do not bear a sign at all**. Usually, in the case of unsigned papers, the tracing of the watermark probably made by Zonghi himself is present inside the file; in one case there is the tracing without the paper sample.

The collection has already been the subject of study some time ago by the **ICPAL – Istituto Centrale per la Patologia degli Archivi e del Libro**. In the online repertoire of the **Corpus Chartarum Italicarum (CCI)** there are some of the papers in the collection, but not all. In general, the number of papers in the collection seems to vary from time to time, perhaps due to loss or addition. Certainly foreign to the collection is a paper with the sign of the "Dragon" found inside the case, which for this reason was not included in the project. On the other hand, two papers described by Zonghi in the *“Le marche principali delle carte fabrianesi dal 1293 al 1599 raccolte e dichiarate dal Canonico Aurelio Zonghi”* are certainly missing.

The information relating to the description of the motifs given by Aurelio Zonghi, the document of origin and the date of each watermark is taken from the *"Elenco e dichiarazione delle marche"* and from what is reported on the **title page of each file**. On the basis of these data, and what is sometimes reported directly on the sheet, a digital database was created which contained all the information available.

In order to carry out the **digitalization** and **graphic elaboration** of documents, the following was implemented:

- Computer iMac 27'' retina 5K 3,3 GHz Intel Core i5
- Scanner Epson Expression 11000XL format A3
- Scanning Programme Silver Fast 8 LaserSoft Imaging
- Adobe Creative Suite (Photoshop e Illustrator)

The papers of the collection initially **underwent reflex scanning** and then **transparency** (backlight) at **300 dpi**. In the transparent scanning a programme SilverFast 8 was internally installed, some parameters implemented to regulate the tones, shades and lights in order to uniform all the scanning regardless of their thickness and weight of the paper. In other cases to prevent an over-exposition on the final result, it was necessary to alter the colour of the paper. Paper whose size measured more than A3 format had to be scanned more than once successively creating various files which were then compiled together: the underlying procedure does not exclude limited margins of error. In the presence of some sheets separated into two parts, the relative scans have been brought as close as possible to at least digitally recreate the complete paper. Reflex scanning and transparency of the same document have also shown a difference in size precisely 0,02 cm to the advantage of the former which resulted in being greater.

Following Zonghi’s example in some respects, we have **reproduced tracings of every single sheet of paper**: the **border, chain lines** (and any eventual backing rods), **watermark, 20 liad lines** (for the measurement). Only where the papers have been described in the inventory, has the information

provided by Zonghi been entered on the database, as for the rest, **digital files relating to the same paper or figure in the album have been over-imposed, thus creating different configurations.**

A precise procedure has been adopted to name the **records (ID)**. All the records in the collection begin with the letters **AR**, to which are added **the file number in which the paper is found** and a final letter which indicates, in alphabetical order, **the variant number of the watermark contained within the file** (e.g. AR019C indicates that within file 19 the one in question is the third paper, in chronological order, with that motif).